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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,353	08/09/2001	Daniel M. Dias	FR91990105US1	4341
45541 7590 11/13/2007 HOFFMAN WARNICK & DALESSANDRO LLC 75 STATE ST 14TH FLOOR ALBANY, NY 12207			EXAMINER DIVECHA, KAMAL B	
			ART UNIT 2151	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	Application No. 09/925,353	Applicant(s) DIAS ET AL.	
	Examiner KAMAL B. DIVECHA	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

Claims 1, 3-8 are pending in this application.

**Reopening Prosecution**

In view of the Appeal Brief filed on August 3, 2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

**Examiner's Note:**

A new ground of rejection shows the existence of the http headers and directives that can be sent by the http servers, i.e. servers implementing web sites, in either response or request to applications such as firewall, gateway, proxy server, etc. (See RFC 2616: HTTP 1.1).

The re-opening of the prosecution is explicitly based on the features such as HTTP headers and directives in the http headers, which may be inherent in Dutta due its network environment (i.e. Internet, Intranet or VPN). All prior responses with respect to Dutta, Pavan, Subramanian and Colby still apply.

**Claim Objections**

Claim 8 is objected to because of the following informalities:

Claim 8 recites "In a network having a plurality of...and a network control scheduler (NCS) a computer readable medium for..."

It is unclear whether the computer readable medium is associated with NCS or is associated with a network.

Appropriate correction is required.

Also note that, since the specification fails to define and/or suggest the use of the computer readable medium, the medium is interpreted to include computer readable storage medium such as hard disk, CD-Rs, RAM, ROM, etc.

Applicant is requested to comment on the use of the computer readable medium, i.e. whether the medium includes storage medium and/or transmission medium.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the term "optionally". It is unclear whether the limitation following the term is actually implemented or not, thus rendering the scope of the claims unascertainable.

Claims 3-6 are rejected for the same reasons as set forth in claim 1.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta et al. (hereinafter Dutta, U. S. Patent No. 6,546,423 B1) in view of Fielding et al. (hereinafter Fielding, RFC 2616).

As per claim 1, Dutta discloses a method for enhancing load controlling of a web site including a plurality of individual servers (fig. 1 item #201, 202) and a network control scheduler (fig. 1 item #203, fig. 2 item #305), said web site using hyper text transport protocol, said method comprising the steps of:

in any one server out of said plurality of individual servers:

issuing load balancing instructions to said NCS (i.e. a firewall or a load balancer), by passing said load balancing instructions to NCS (col. 5 L14-21), including the steps of:

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including directives (i.e. instructions) that must be obeyed by said NCS (col. 5 L14-21, i.e. server A is interpreted as any one server out of server A and B, which sends a message instructing firewall to reduce amount of traffic to server A) and

optionally including a filter (such as cookie, url, headers as per applicant specification, pg. 7 line 14 to pg. 8 line 7: admitted prior art) to limit a scope of application of said directives (col. 5 L9-30: redirecting traffic in accordance with rule x to another server, rule x is a filter that limits the scope of application of said directive, in this case redirect directive);

receiving said load balancing instructions in said NCS from said any one server (col. 5 L23-30); and

complying with said load balancing instructions upon receipt (col. 5 L18-29, firewall receives the instruction to reduce the amount of traffic or else specifically redirect the traffic to another server from server A, and directs the traffic to another server, i.e. to server B),

wherein the any one server out of said plurality of individual servers is adapted to issue the load balancing instructions (server A of Dutta's system, col. 5 L14-21) that apply to any of the plurality of individual servers (server B of Dutta's system, server B is affected since server A's traffic is now directed to server B based on the instruction or message from server A, wherein message is also applied to server which sent the message to firewall, col. 5 L14-21).

However, Dutta does not disclose the process wherein the load balancing instructions are issued in a NCS-control HTTP header (i.e. http header according to applicant specification, pg. 7 lines 14-20).

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Fielding explicitly discloses passing the directives including instructions to the proxy servers in a http headers (section 14.9: directives for instructing servers, section 4.2: message headers, section 4.5: header fields and its extension, 10.3: redirecting code).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Dutta in view of Fielding in order to pass the directives in a http header.

One of ordinary skilled in the art would have been motivated because HTTP is a generic protocol used by the user agents and proxies/gateways and other Internet systems (Fielding: section 1.1, 1.4: goal of http 1.1).

As per claims 7-8, they do not teach or further define over the limitations in claim 1. Therefore claims 7-8 are rejected for the same reasons as set forth in claim 1.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being obvious over Dutta et al. (hereinafter Dutta, U. S. Patent No. 6,546,423 B1) in view of Fielding et al. (hereinafter Fielding, RFC 2616), and further in view of Pavan et al. (hereinafter Pavan, U. S. Patent No. 6,801,943 B1).

As per claim 3, Dutta discloses the process wherein the instructions (directives) include flow-control instructions (directives, Dutta, col. 5 L18-29), however, Dutta does not disclose the directives known as sharing and NCS-queuing (queuing) directives.

Pavan, from the same field of endeavor, discloses a flow control directive (col. 4 L51-54: read scheduling of packets as flow control mechanism); sharing directives (col. 4 L5-6: scheduler capable of to schedule the use of shared resources); and NCS-queuing directives (col. 4L14-20 and fig. 6 and col. 5 L23-50).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Dutta in view of Pavan, in order to include sharing and queuing directives, since Pavan discloses flow-control directive, sharing directive, and NCS-queuing directive.

One of ordinary skilled in the art would have been motivated because it would have controlled and load balanced the network traffic, managed the queue of packets and improved the network congestion (Dutta, col. 5 L18-29 and Pavan, see abstract, col. 3 L56 to col. 4 L55).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Dutta et al. (hereinafter Dutta, U. S. Patent No. 6,546,423 B1) in view of Fielding et al. (hereinafter Fielding, RFC 2616), in view of Pavan et al. (hereinafter Pavan, U. S. Patent No. 6,801,943 B1) in view of Millard (Pub. No.: 2002/0087282 A1), and further in view of Subramanian et al. (Pub. No.: US 2002/0194211 A1).

As per claim 4, Dutta in view of Pavan discloses the process of decreasing amount of traffic directed to server A (i.e. interpreted as a decrease rate directive to decrease a rate at which requests to said any one server are sent, Dutta col. 5 L18-29), however Dutta and Pavan does not explicitly disclose the process wherein said flow-control directives include an increase-rate directive to require said NCS to increase a rate at which requests to said any one server are sent; an increase-window directive to require said NCS to increase a number of jobs allowed to be simultaneously processed in said any one server; and a decrease-window directive to require said NCS to decrease a number of jobs allowed to be simultaneously processed in said any one server.



Millard, from the same field of endeavor teaches the process of increasing/decreasing rate at which requests are sent to the server (interpreted as increase rate directive, pg. 1-2 block #9, pg. 5 block #42-48). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Dutta and Pavan, in view of Millard, to include the increase rate directive for increasing the a rate at which requests to any one server are sent, since Millard teaches the process of increasing and decreasing the rate at which requests are sent to the server.

One of ordinary skilled in the art would have been motivated because it would have increased or decreased the stress on the target server or machine (Millard, pg. 1-2 block #9).

However, Millard does not disclose the process wherein flow-control directives include an increase-window directive to require said NCS to increase a number of jobs allowed to be simultaneously processed in said any one server and a decrease-window directive to require said NCS to decrease a number of jobs allowed to be simultaneously processed in any one server.

Subramanian, from the same field of endeavor discloses the process of increasing and reducing the number of concurrent requests (read as number of jobs allowed to be processed simultaneously, pg. 11 block #157-159). Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to Dutta, Pavan and Millard, in view of Subramanian, to include the process of increasing or decreasing the number of jobs or requests allowed to be processed simultaneously in any one server, since Subramanian teaches the process of increasing or decreasing number of concurrent jobs to be processed by a server.

One of ordinary skilled in the art would have been motivated because it would have avoided overloading or congestion in the system with too many requests (Subramanian, pg. 11 block #159).

5. Claims 5-6 is rejected under 35 U.S.C. 103(a) as being obvious over Dutta et al. (hereinafter Dutta, U. S. Patent No. 6,546,423 B1) in view of Fielding et al. (hereinafter Fielding, RFC 2616), in view of Pavan et al. (hereinafter Pavan, U. S. Patent No. 6,801,943 B1) in view of Millard (Pub. No.: 2002/0087282 A1) in view of Subramanian et al. (Pub. No.: US 2002/0194211 A1) and further in view of Colby et al. (hereinafter Colby, U. S. Patent No. 6,625,643 B1).

As per claim 5, Dutta, Fielding, Pavan and Subramanian discloses complying with the directive by depositing the http headers and/or directives included in the message to the firewall that is added or applied to packets with some equivalent characteristics (Dutta, col. 5 L9-29: i.e. loading the rule or directive, Fielding: section 14.9), however Dutta, Pavan and Subramanian does not disclose the process aimed at enabling an information sharing within all members of said plurality of individual servers and said NCS (i.e. shared directive) and the process aimed at clearing previous said information sharing (i.e. clear directive).

Colby discloses a broadcast manager capable of sending and receiving system messages comprising: a share message for enabling information sharing within all members (interpreted as share directive: col. 3 L32-38, col. 4L54-55, col. 8 L37-51; col. 14 L45-50); and a clear message for stopping or canceling the shared information (interpreted as clear directive: col. 15 L15-20; col. 4L43-46; col. 16 L40-44). Therefore, it would have been obvious to a person of ordinary

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skilled in the art at the time the invention was made to incorporate the teaching of Colby as stated above with Dutta, Pavan and Subramanian in order to enable information sharing within all members of plurality of servers and clearing a previous said information sharing.

One of ordinary skilled in the art would have been motivated because it would keep the system (i.e. load balancer and servers) in synchronization (Colby, col. 9 L60-62).

As per claim 6, Dutta does not disclose the process wherein NCS-queuing directives including: a lock directive aimed at locking resources identified by said filter and an unlock directive aimed at releasing previously locked said resources.

Pavan, from the same field of endeavor discloses NCS-queuing directives including: a lock directive aimed at locking resources identified by said filter (Pavan, read as HOLD directive, col. 5L18-42, fig. 2 item #38) and an unlock directive aimed at releasing previously locked said resources (Pavan, read as RELEASE directive, col. 5L18-42, fig. 2 item #34).

Therefore, it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Dutta in view of Pavan, in order to provide lock directive for locking resources and unlock directive for releasing locked resources, since Pavan teaches hold and Release directive.

One of ordinary skilled in the art would have been motivated because it would have avoided the network congestion by controlling the service requests in a service queued and it would have controlled the behavior of the load-balancer or scheduler and would have ensured that the user-level scheduling requirements are met (Pavan, col. 5 L17-22, col. 6 L7-12).

**Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Evans et al., U. S. Patent No. 6,061,363.
- b. Wolff, U. S. Patent No. 6,886,035 B2: Dynamic Load balancing of a network of client and server computers: teaches the process of issuing load balancing instructions from a clustered node to load balancer.

**Conclusion**

In order to move prosecution forward, applicant is suggested to consider incorporating the subject matter of claims 3-6 into the independent claims.

This action is made Non-Final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamal Divecha/

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Art Unit 2151  
November 9, 2007.



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